

SUPPORT ACTIVITIES OF THE DEPARTMENT OF VETERINARY
MEDICINE (1 OCT. '82 - 30 SEPT. '83)

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BACKGROUND : An animal colony with technical histological and laboratory support is required to furnish animal models to support the AFRIMS research projects.

MATERIALS & METHODS : Breeding colonies of rhesus and cynomolgus monkeys, hamsters, rabbits, and mice are maintained at the Department of Veterinary Medicine in addition to small numbers of guinea pigs, sheep, geese and 1 miscellaneous species. The facility consists of 4 screened animal wings partially enclosed with a total of 30,000 sq ft and 4 enclosed air-conditioned rooms with a total of 2,600 sq feet as well as rooms for office, labs, surgery, etc. Histopathological and malaria laboratory technique are standard procedures. Clinical laboratory techniques are not automated and there are 3 laboratory technicians. *Leptospira* culturing is done in modified EMJH media (Difco).

RESULTS : During FY 1983 the laboratory animal colony supplied a large number of research animals to both AFRIMS investigators and investigators from other research institutions, universities and hospitals. A total of 65,656 mice, 22 guinea pigs, 904 hamsters, and 65 rabbits were supplied to AFRIMS and the following institutions : Thai Component AFRIMS, Thailand Institution of Science, Thailand Department of Livestock Development, Rajvithi Hospital, Faculty of School of Public Health, Faculty of School of Tropical Medicine (M.U.), Faculty of Pharmaceutical Science (CU), International School, Pesticide Research Lab. Department of Agriculture, Faculty of School of Veterinary Medicine (CU), Laboratory Animal Research Center, Chulalongkorn Hospital. Besides monkeys and the above species, 5 other species (ducks, dogs, sheep, geese and a cow) were maintained for research by AFRIMS and collaborating institutions. In addition 36,734 ml of sheep, goose, rabbit, calf, monkey, horse and mouse blood was issued to AFRIMS, the Thai Component, Seventh Day Adventist Hospital, Mahidol University, Medical Unit US Embassy, and Faculty of School of Public Health.

Nonhuman primates produced at AFRIMS should meet FY 84 requirements. Eleven AFRIMS captive-born cynomolgus and 25 rhesus purchased from Davis Primate Center were shipped to WRAIR. The primate breeding colony has become productive again as the TB outbreak came under control and breeding harems were reestablished. Thirty-eight rhesus reactors were treated with INH and streptomycin for 6 months. The weanlings will be used in antimalarial drug testing. The breeders have been regrouped into 2 newly constructed breeding cages in a wing separate from the TB negative breeding colony and experimental

monkeys and 3 births have occurred so far. As soon as mature rhesus females complete antimalarial drug testing they will be incorporated in the breeding colony. In FY 83, 29 live rhesus and 21 live cynomolgus were produced.

Inadequate dialy production of suckling mice occurred until March 1983 when 500-1000 suckling mice were produced daily. This exceeded demand which was only 300-400/day so production will be decreased accordingly. This high production has been achieved by obtaining disease free stock and raising them under virus proof, cage filter tops in 2 air-conditioned rooms. A small breeding colony of BALB/c mice has been established at AFRIMS so investigators can produce hybridoma antibodies.

Activities of the hematology/histopathology laboratory are summarized as follows :

Malaria parasite counts 3,318 thick & thin blood films

Sporozoite counts 24 slides

RBC counts 1,139

WBC counts 1,236

Drugs weighed for malaria project 999 doses

CBCs in laboratory and domestic animals 182 cases

Fecal examinations for parasites 15 specimens

Leptospira : MAG screening tests 151; MAG titer titration 422;
cultures 1919 specimens; hamsters inoculated,
treated & cultured 685.

Rabies : mouse inoculation : 834;

Monkey-CSF 46, sera 61.

Dogs - 78 sera, 74 CSF, 49 saliva

Serum & tissue processing for storage or shipment :

Hantaan virus study - 90 human sera specimens

167 rodent sera

507 rodent tissue specimens

JE Virus study

Monkey - 63 serum samples

51 CSF samples

Pig - 360 serum samples

Normal Mouse Serum - 829 cc

Dr. Puri from Central Drug Reserach Institute in Lucknow, India was trained in the methodology of the *Plasmodium cynomolgi* antimalarial compound testing model for a 3 week period. Histopathology : 474 cases; 1,539 blocks, 4,617 slides, 182 special stains, 1,620 H & E stains.

Several miscellaneous tasks and projects have been completed at Dept. Vet. Med. in FY 83. A hyperchlorinated water system has been installed. A self help, facility refurbishing and repainting program has been completed. Local purchase of rodent and monkey chow has eliminated chronic insect and mold problems previously encountered with food shipped from the United States. A Laboratory Animal Use Review Committee composed of 7 members has been formed to review research protocols involving laboratory animals and inspect the facilities semiannually.